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REMARKS

Claims 1-46 are all the claims presently pending in the application.

Claims 6, 13, and 43 stand rejected under 35 U.S.C. § 112, first paragraph and claims 6, 11-35, and 43 stand rejected under 35 U.S.C. § 112, second paragraph. The claims have been amended above in a manner believed fully responsive to all points raised by the Examiner.

Entry of this §1.116 Amendment is proper. Since the amendments above narrow the issues for appeal and since such features were in the claims earlier (e.g., for example in dependent claims 9-10 and 25, such amendments do not raise a new issue requiring a further search and/or consideration by the Examiner. As such, entry of this Amendment is believed proper and is earnestly solicited.

It is noted that the claims have been amended solely to more particularly point out Applicant's invention for the Examiner, and not for distinguishing over the prior art, narrowing the claim in view of the prior art, or for statutory requirements directed to patentability.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached pages are captioned "Version with markings to show changes made".

Claims 1-5, 15, 38-40 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Niwa (U.S. Patent No. 6,453,301 B1) (hereinafter "Niwa").

Claims 7-8, 24, 41-42 and 44-46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Niwa in view of Henley (U.S. Publication No. 2002/0065758 A1) (hereinafter "Henley").

These rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

Applicant's invention, as defined for example in independent claim 1 (and substantially

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similarly in independent claims 2, 24, 34-39, and 41) is directed to a system (and method) for conducting business electronically between a first party and a second party including providing an intermediary relationship with a third party who knows an identity of the first party but no privacy-compromising information regarding a proposed electronic business transaction between the first and second parties, conducting the electronic business transaction between the first and second parties through the third party such that the identity of the first party is kept from the second party.

A feature of the present invention, in a non-limiting embodiment as defined by independent claim 1, 2, 24, 34-39, and 41 is that the provision of an intermediary relationship includes the third party replacing an identification data about the first party with an identifier whose linkage to the identification data is known only to the third party.

Further, as discussed in detail in the November 8, 2002 Amendment incorporated herein by reference, a feature of the present invention is that a second party is only able to identify the first party as a counterpart in the electronic business transaction.

With such features, potential customers perceive and are provided increased privacy and security associated with electronic commerce while the business entity is provided with some level of business intelligence (e.g. see 16-20 and page 17, lines 1-2).

An exemplary configuration of the system and method for a system (and method) for conducting business electronically between a first party and a second party is shown in Figs. 1-5 of the application.

The conventional systems, such as those discussed below and in the Related Art section of the present application, do not have such a structure, and fail to provide for such an operation.

II. THE PRIOR ART REFERENCE

A. Niwa Reference

The Examiner asserts:

[regarding claims 1, 3, 15, 38 and 40] Niwa discloses a method of using a personal device in conducting transactions over a network such that Applicant's third party reads on element 10, Applicant's first party reads on the customer, element 52, Applicant's second

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party reads on a merchant, element 62, and Applicant's step of providing the second party with information identifying said first party only as a transactional party in said electronic business transaction reads on the authorization given to the merchant by the settlement bank, element 10.

Firstly, Applicant respectfully submits that the Examiner's assertions regarding Niwa are erroneous. That is, Niwa is directed to an aspect of e-commerce which is completely different from that of the present invention. Specifically, Niwa has as its object a fingerprint identification.

In contrast, the present invention is about privacy and anonymity protection for aspects of commerce that require a strong form of identification.

More specifically, an object of the present invention is not just an anonymous commercial relationship, as in the conventional methods, but is an anonymous commercial relationship in contexts where conventional art anonymity and/or privacy technologies cannot possibly be used.

As a consequence of the divergence of fields, any partial coincidence of description between the present invention and Niwa (or for that matter any of the other cited references) would be a superficial coincidence having nothing to do with the novel features of the present invention.

In view of the above, Applicant strongly disagrees with the Examiner's assertions about the anticipation or obviousness of the claimed invention, and notes that Niwa is about authentication and involves a three-party transaction including a customer (e.g., the first party), a merchant (e.g., second party), and one or more financial institutions (e.g., the third party).

In Niwa, the authentication role is given to the third party (e.g., as the bank would have to pay if the customer was improperly identified, and/or its authorization of payment improper).

The object of Niwa is to address the concern of the merchant that cumbersome identification methods may prevent some people from using e-commerce.

In this regard, Niwa proposes a biometrics capturing means that is easy to use and which offers some level of security based on cryptographic techniques. Niwa does not disclose or suggest privacy protection or anonymity protection. Instead, as the fingerprint is

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kept in the device of Niwa and the matching is performed in the device of Niwa, it does not offer extra protection of anonymity or prevent privacy invasion.

In contrast to Niwa, in the present invention, the three main parties are a customer (e.g., the first party), a merchant (e.g., the second party having access to confidential data and not to information that would permit identification), and a third party (e.g., the third party knows the customer identification, but not confidential data).

In the present invention, the third party of the present invention is entirely different from the third party (e.g., the financial institution) of Niwa. Specifically, a feature of the present invention is the novel role of the third party of the present invention.

The authentication and anonymity/privacy protection function of the third party of the present invention are not taught or suggested by Niwa. Specifically, this function matches the identification of the customer known to the third party with aspects of the transactions that need to be kept secret from the third party.

In this manner, the anonymity/privacy protection of the customer is provided, even though the customer is known to the third party. As described in the specification, many new techniques need to be involved to guarantee feasibility of the third party's role in the present invention.

For example, as defined by independent claims 1-2 and 38-39, the third party's role includes the third party replacing an identification data about the first party with an identifier whose linkage to the identification data is known only to the third party. The identifier is then sent to the business entity.

Nowhere does Niwa disclose or suggest such a feature. Instead as shown in Fig. 1 of Niwa, both the on-line goods provider 62 and the settlement/payor bank are receiving a same fingerprint authorization code from a fingerprint device. As disclosed in Niwa, "*the payor bank 10 analyzes the authentication code (action 124) to verify its validity prior to authorizing the transaction*" (e.g., see column 6, lines 24-26). Further, Niwa discloses that "*[a]t action 128, the payor bank 10 preferably transmits the authorization condition to the provider of goods and /or services and the provider of goods/or services determines whether the authorization condition is positive or negative (action 130)*".

Nowhere does Niwa teach or suggest that the payor/bank 10, which the Examiner asserts corresponds to the third party of the present invention (e.g., see page 4, item 8 of the

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Office Action), replaces an identification data about the first party with an identifier whose linkage to the identification data is known only to the third party, (e.g., the bank as asserted by the Examiner). As described in the specification in the invention, the third party (e.g., "T") replaces a header with identification data about the customer with a number which is sent to the provider of goods and services (e.g., see page 19, lines 5-8 of the specification).

Additionally, the method of the present invention (e.g., as defined for example by dependent claim 11) includes verifiers that control certain data that is matched to a given customer (e.g., for health insurance, life insurance, or about a customer's automobile for car insurance).

Also, regarding a fourth party, in Niwa the fourth party is a bank. In contrast, in the present invention as defined by some of the dependent claims, the optional fourth party is a technology provider, that provides the customer with anonymity/privacy protecting devices, and this fourth party is related to the third party of the present invention, which as described above is much different from the settlement/payor bank 10 of Niwa.

Hence, turning to the clear language of independent claim 1 (and substantially similarly of independent claim 2 and 38-39), there is no teaching or suggestion of "[a] *method of conducting business electronically between a first party and a second party, comprising:*

providing an intermediary relationship with a third party who knows an identity of the first party but no privacy-compromising information regarding a proposed electronic business transaction between the first and second parties; and

conducting the electronic business transaction between said first and second parties through the third party such that said identity of said first party is kept from the second party,

wherein said second party is provided with information identifying said first party only as a transactional party in said electronic business transaction, and

wherein said providing an intermediary relationship by said third party comprises replacing an identification data about said first party with an identifier whose linkage to said identification data is known only to said third party" (emphasis Applicant's).

For the reasons stated above, independent claims 1-2 and 38-39 (and dependent claims 3-5, 15, and 40) of the claimed invention are fully patentable over Niwa.

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B. The Henley Reference

The Examiner asserts:

[regarding claim 24] Henley teaches that the buyer (customer) can register on-line, page3 7-8, paragraph [0098].

Although neither Niwa nor Henley specifically teach the type of encryption used for communications between the parties, it is considered to be old and well known that a customer will have software that will enable him to encrypt any private information (application) using the public key of the recipient (business entity) as is done using public key encryption (public signature scheme).

Therefore, it is considered that it would have been obvious, if not inherent, to modify the combined teachings of Niwa and Henley to include public key encryption for the purpose of encrypting the information passed between the parties as a matter of design choice.

However, Applicant respectfully disagrees and submits that the Examiner's reliance upon Niwa and Henley, either alone or in combination, is erroneous.

First, there is no basis, reasoning or motivation to modify Niwa with Henley, absent the Examiner's impermissible hindsight reconstruction, because the objects of the references are entirely different and unlikely to be combined. Specifically, Niwa discloses a fingerprint device used in authorizing transactions and Henley is concerned with auctioning.

As disclosed, Henley is about "conducting auctions for delivery of proffered services and maintains a registration database of service providers and bidders" (e.g., see Abstract of Henley). In contrast, Niwa is about "authorizing a commercial transaction between a customer and a provider of goods or services.....by activating a fingerprint device" (e.g., see Abstract of Niwa). Thus, Applicant submits that the Examiner's urged combination of references would not have been obvious at the time the invention was made. Further, even if the references would have been combined (arguendo), the combination of Niwa and Henley would not have taught or suggested the features of the present invention including anonymity protection.

Applicant points out that while Henley is an auction system for medical services, that

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such auctions on the Internet are conventional art (e.g., similar to e-Bay). Similarly, privacy protection is also well known in the conventional art.

Additionally, and in contrast to the present invention which offers very special forms of anonymity/privacy protection, the conventional art of Niwa and Henley, alone or combined (arguendo), do not teach or suggest that a "third party replaces an identification data about said customer with an identifier whose linkage to said identification data is known only to said third party", as defined by independent claim 24. Thus, Niwa and Henley are unable to provide the advantages of the present invention including an increased privacy and security in an e-commerce environment.

Hence, turning to the clear language of independent claim 24 (and substantially similarly of independent claim 41), there is no teaching or suggestion of "[a] method of selecting a purveyor of goods or services in a confidential manner over a network, comprising:

sending, by a customer to a third party, an application and software for encrypting the application using a public key $pub(I)$,

wherein said application is taken electronically from a business entity,

wherein a public signature scheme of said business entity is $(Pr1(I), pub(I))$, said software allowing the customer to compute a public signature scheme $(Pr2(I,C), pu2(I,C))$, and

wherein said business entity is provided with information identifying said customer only as a transactional party in said electronic business transaction, and

wherein said third party replaces an identification data about said customer with an identifier whose linkage to said identification data is known only to said third party" (emphasis Applicant's).

Further, dependent claims 7-8, 42, and 44-46 when taken in combination with their respective independent claims, define additional novel limitations.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-46, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in

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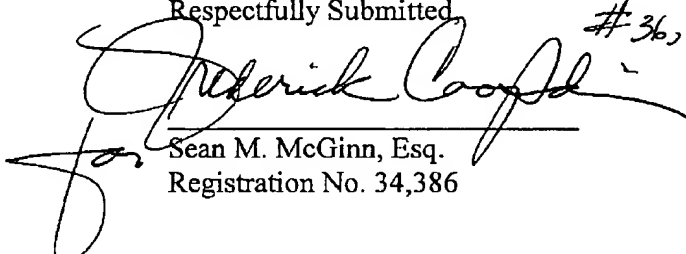
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condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted

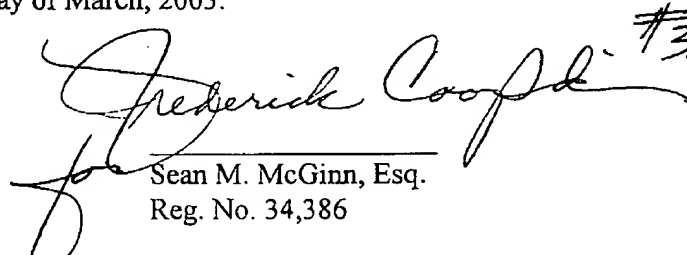
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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment by facsimile with the United States Patent and Trademark Office to Examiner Marianne Huseman, Group Art Unit 3621 at fax number (703) 305-7687 this 28th day of March, 2003.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1 1. (Amended) A method of conducting business electronically between a first party and a
2 second party, comprising:

3 providing an intermediary relationship with a third party who knows an identity of
4 the first party but no privacy-compromising information regarding a proposed electronic
5 business transaction between the first and second parties; and

6 conducting the electronic business transaction between said first and second parties
7 through the third party such that said identity of said first party is kept from the second
8 party,

9 wherein said second party is provided with information identifying said first party
10 only as a transactional party in said electronic business transaction, and

11 wherein said providing an intermediary relationship by said third party comprises
12 replacing an identification data about said first party with an identifier whose linkage to
13 said identification data is known only to said third party.

1 2. (Amended) A method of performing electronic commerce without a candidate customer
2 being forced to disclose private data together with an identity of the candidate customer, to
3 a business entity requiring said private data, said method comprising:

4 establishing an intermediary relationship with a third party between the candidate
5 customer and the business entity;

6 providing a proprietary item to said customer such that the customer can be identified
7 as a legitimate owner of the item without revealing the identity of said customer; and

8 performing electronic commerce between said customer and said business entity
9 through said third party, utilizing said proprietary item, such that an identity of said
10 customer is kept from said business entity party,

11 wherein said business entity is provided with information identifying said customer

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12 only as a transactional party in said electronic business transaction, and
13 wherein said providing an intermediary relationship by said third party comprises
14 replacing an identification data about said first party with an identifier whose linkage to
15 said identification data is known only to said third party.

6. (Amended) The method according to claim 5, wherein said portable device P(C) generates numbers S(C,n), where n is an integer belonging to a set {1, 2, . . . , N}, and wherein for at least one of a new business [unit] entity and another partner of the customer, a new number n is chosen for all further transactions between the customer and said at least one of said new business unit and said another partner.

11. (Amended) The method according to claim 2, wherein, before [sending application to the business entity] establishing an intermediary relationship, the customer accesses one or more verifiers V_j, and

wherein the customer identifies itself to each verifier V_j using a number S(C) associated with the proprietary item, and requests V_j to send S(C) to the business entity, together with data verified by V_j.

12. (Amended) The method according to claim 11, wherein communication to the business entity is performed by appending to the number S(C) [the] a non-identity [relevant] data relevant to the customer encrypted using $\text{pub}(I)$.

13. (Amended) The method according to claim 11, wherein a link between the third party and the business entity is provided by the third party posting [all] one or more completed [applications] application on a dedicated world-wide-web (WWW) page after [removing clear] replacing customer identification data [thereof, and tagging by] with a number N(T,C, I) which [has a redundancy allowing] allows the business entity, but no other party, to recognize this number as a number associated with the business entity.

14. (Amended) The method according to claim 2, wherein a payment between a business entity and a third party is documented by [the] a paying party by attaching a tagging number

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to the payment,

said tagging number being communicated to a bank of the paying party, and
accompanies [the] a transaction order to the bank of the payee, and

wherein the paying bank [accepts the] authorizes a money transfer in exchange [of
the] for a tag coded using a private key of the payee's bank.

16. (Amended) The method according to claim 15, wherein, when [submitting] a
transaction request is submitted, the customer addresses the transaction request to the third
party, after selectively consulting with one or more verifiers Vj.

1 24. (Amended) A method of selecting a purveyor of goods or services in a confidential
2 manner over a network, comprising:

3 sending, by a customer to a third party, an application [to a third party along with] and
4 software [which allows] for encrypting the application using a public key pu1(I),

5 wherein said application is taken electronically from a business entity,

6 wherein a public signature scheme of said business entity is (Pr1(I),pu1(I)), [said].
7 software allowing the customer to compute a public signature scheme (Pr2(I,C),pu2(I,C)),
8 and

9 wherein said business entity is provided with information identifying said customer
10 only as a transactional party in said electronic business transaction, and

11 wherein said third party replaces an identification data about said customer with an
12 identifier whose linkage to said identification data is known only to said third party.

1 34. (Amended) A system for conducting business electronically between a first party and a
2 second party, comprising:

3 means for providing to a third party an identity of the first party but no
4 privacy-compromising information regarding a proposed electronic business transaction
5 between the first party and second party; and

6 means for conducting the electronic business transaction between said first party and
7 second party through the third party such that said identity of said first party is kept from
8 the second party,

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9 wherein said second party is provided with information identifying said first party
10 only as a transactional party in said electronic business transaction, and
11 wherein said third party replaces an identification data about said first party with an
12 identifier whose linkage to said identification data is known only to said third party.

1 35. (Amended) A signal-bearing medium tangibly embodying a program of
2 machine-readable instructions executable by a digital processing apparatus to perform a
3 method for conducting business electronically between a first party and a second party, said
4 method comprising:

5 providing to a third party an identity of the first party but no privacy-compromising
6 information regarding a proposed electronic business transaction between the first and
7 second parties; and

8 conducting the electronic business transaction between said first and second parties
9 through the third party such that said identity of said first party is kept from the second
10 party,

11 wherein said second party is provided with information identifying said first party
12 only as a transactional party in said electronic business transaction, and
13 wherein said third party replaces an identification data about said first party with an
14 identifier whose linkage to said identification data is known only to said third party.

1 36. (Amended) A system for performing electronic commerce without a candidate
2 customer being forced to disclose private data together with an identity of the candidate
3 customer to a business entity requiring said private data, said system comprising:

4 means for establishing an intermediary relationship with a third party between the
5 candidate customer and the business entity;

6 a proprietary item provided to said customer such that the customer can be identified
7 as a legitimate owner of the item without revealing the identity of said customer; and

8 means for performing electronic commerce between said customer and said business
9 entity through said third party, utilizing said proprietary item, such that an identity of said
10 customer is kept from said business entity party,

11 wherein said business entity is provided with information identifying said candidate

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customer only as a transactional party in said electronic commerce, and
wherein said third party replaces an identification data about said customer with an
identifier whose linkage to said identification data is known only to said third party.

37. (Amended) A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method of performing electronic commerce without a candidate customer being forced to disclose private data together with an identity of the candidate customer to a business entity requiring said private data, said method comprising:

establishing an intermediary relationship with a third party between the candidate customer and the business entity;

providing a proprietary item to said customer such that the customer can be identified as a legitimate owner of the item without revealing the identity of said customer; and

performing electronic commerce between said customer and said business entity through said third party, utilizing said proprietary item, such that an identity of said customer is kept from said business entity,

wherein said business entity is provided with information identifying said customer only as a transactional party in said electronic commerce, and

wherein said third party replaces an identification data about said customer with an
identifier whose linkage to said identification data is known only to said third party.

38. (Amended) A method of conducting business electronically between a first party and a second party, comprising:

providing an intermediary relationship with a third party who knows an identity of the first party but no privacy-compromising information regarding a proposed electronic business transaction between the first party and the second party; and

conducting the electronic business transaction between said first party and said second party through the third party such that said identity of said first party is kept from the second party, but second party can obtain confidential data about first party that do not compromise the identity of said first party,

wherein said third party replaces an identification data about said first party with an

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12 identifier whose linkage to said identification data is known only to said third party.

1 39. (Amended) A method of conducting business electronically between a first party and a
2 second
3 party, comprising:

4 providing an intermediary relationship with a third party who knows an identity of the
5 first party but no privacy-compromising information regarding a proposed electronic
6 business transaction between the first and second parties, said third party enabling
7 communications between the first and second party and having access to the identity but
8 not to the content or the nature of the transaction; and

9 conducting the electronic business transaction between said first and second parties so
10 that the identity of said first party is not available to the second party,

11 wherein said second party receives confidential data about said first party unrelated to
12 the identity of said first party, and

13 wherein said third party replaces an identification data about said first party with an
14 identifier whose linkage to said identification data is known only to said third party.

1 41. (Amended) A method of performing electronic commerce without a candidate
2 customer being
3 forced to disclose private data together with an identity of the candidate customer, to a
4 business entity requiring said private data, said method comprising:

5 establishing an intermediary relationship with a third party between the candidate
6 customer and the business entity;

7 providing a proprietary item to said customer such that the customer can be identified
8 as a legitimate owner of the item without revealing an identity of said customer; and

9 performing electronic commerce between said customer and said business entity
10 through said third party, utilizing said proprietary item, such that the identity of said
11 customer is unknown to said business entity,

12 wherein said third party can recognize, without having access to an identity, each
13 customer to conduct business over an extended period of time and in repeated interactions,
14 and accumulate all data needed to service the customer, to conglomerate such data to

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- 15 provide a customer history or subject the data to data mining technologies, and
16 wherein said third party replaces an identification data about said customer with an
17 identifier whose linkage to said identification data is known only to said third party.